

1983

CALHOUN NATIONAL WILDLIFE REFUGE
Brussels, Illinois

ANNUAL NARRATIVE REPORT
Calendar Year 1983

U.S. Department of the Interior
Fish and Wildlife Service
NATIONAL WILDLIFE REFUGE SYSTEM

INTRODUCTION

Calhoun NWR the southern most district of the Mark Twain National Wildlife Refuge is an important link in the chain of resting, feeding, and wintering areas for birds migrating along the Mississippi Flyway.

Calhoun Refuge is made up of the Calhoun Division, on which the refuge office is located, the Batchtown Division and the Gilbert Lake Division.

The Calhoun Division is located three miles above the confluence of the Illinois and Mississippi Rivers in Calhoun County. This is approximately 20 air miles north of St. Louis. Batchtown Division is located on the Mississippi River 5 miles above lock and dam #25 in Calhoun County. Gilbert Lake is located on the Illinois River in Jersey County 5 miles above the point where the Illinois River flows into Mississippi River.

Lands are primarily General Plan Lands purchased by the U.S. Army Corp of Engineers for their 9 foot navigation project. Lands in excess to the navigation project are administered as a part of the refuge system through a 1963 Cooperative Agreement between the Corps and the U.S. Fish and Wildlife Service.

Calhoun Division contains 4,534 acres of which 852 acres are fee title land. Batchtown Division is made up of 2,248 acres all of which are GP lands. Gilbert Lake Division consists of 506 acres of GP land and 128 acres owned by the Illinois Department of Conservation, which are administered by the Fish and Wildlife Service through a Cooperative Agreement between the two agencies.

PERSONNEL

Name

George W. Peyton	Refuge Manager	GS-11	PFT	8/14/77
Eric N. Smith	Assistant Refuge Manager	GS-5	PFT	9/19/83
Lucille M. Douglas (Resigned 4/29/83)	Clerk-Typist	GS-3	PPT	7/13/80
Debra D. Kuhn	Clerk-Typist	GS-3	PPT	7/21/83
Eugene A. Simon	Maintenance Mechanic	WG-9	PFT	12/29/65

YCC

Michael G. LaMarsh

6/13/83 - 8/15/83

Review and Approvals

<i>George W. Peyton</i>	<i>02/10/84</i>	<i>[Signature]</i>	<i>2/21/84</i>
Submitted By	Date	Mark Twain NWR Project Leader Review	Date

<i>[Signature]</i>	<i>5/29/84</i>
Regional Office Review	Date



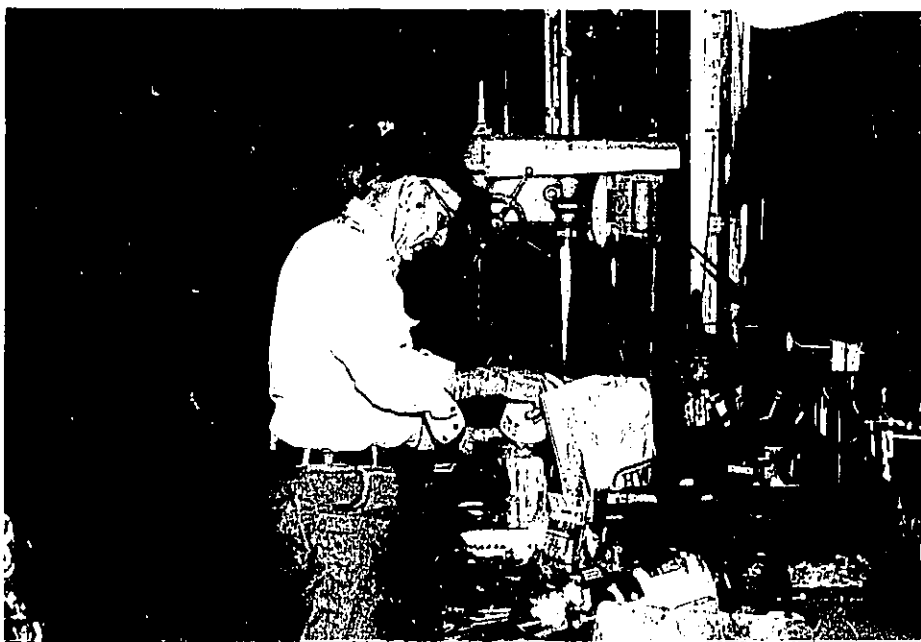
George W. Peyton, Refuge Manager, GS-11



Eric N. Smith, Assistant Refuge Manager, GS-5



Debra D. Kuhn, Clerk-Typist GS-3



Eugene A. Simon, Maintenance Mechanic WG-9



Michael La Marsh, YCC

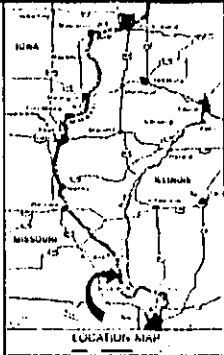
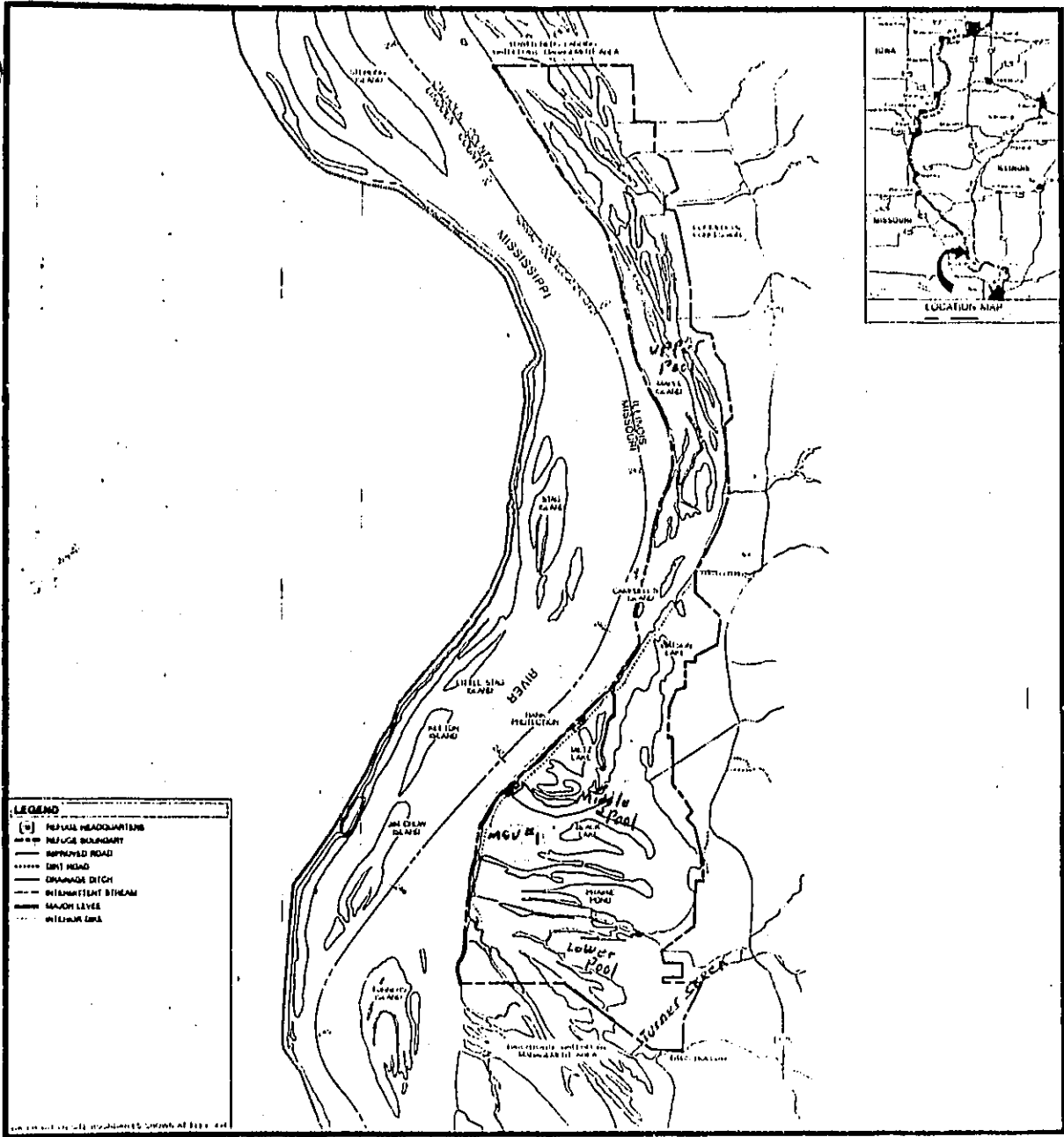


TABLE OF CONTENTS

PAGE

A. HIGHLIGHTS

1

B. CLIMATIC CONDITIONS

C. LAND ACQUISITION

1. Fee Title	Nothing to Report
2. Easements	Nothing to Report
3. Other	Nothing to Report

D. PLANNING

1. Master Plan	Nothing to Report
2. Management Plan	Nothing to Report
3. Public Participation	Nothing to Report
4. Compliance with Environmental Mandates	Nothing to Report
5. Research and Investigations	Nothing to Report

E. ADMINISTRATION

1. Personnel	Nothing to Report
2. Youth Programs	Nothing to Report
3. Other Manpower Programs	Nothing to Report
4. Volunteer's Program	Nothing to Report
5. Funding	Nothing to Report
6. Safety	Nothing to Report
7. Technical Assistance	Nothing to Report
8. Other Items	Nothing to Report

F. HABITAT MANAGEMENT

1. General	Nothing to Report
2. Wetlands	1
3. Forests	Nothing to Report
4. Croplands	1
5. Grasslands	Nothing to Report
6. Other Habitats	Nothing to Report
7. Grazing	Nothing to Report
8. Haying	Nothing to Report
9. Fire Management	Nothing to Report
10. Pest Control	1
11. Water Rights	Nothing to Report
12. Wilderness and Special Areas	Nothing to Report
13. WPA Easement Monitoring	Nothing to Report

<u>G. WILDLIFE</u>	<u>PAGE</u>
1. Wildlife Diversity	Nothing to Report
2. Endangered and/or Threatened Species	2
3. Waterfowl	2
4. Marsh and Water Birds	6
5. Shorebirds, Gulls, Terns, and Allied Species.	6
6. Raptors	6
7. Other Migratory Birds	Nothing to Report
8. Game Mammals.	8
9. Marine Mammals.	Nothing to Report
10. Other Resident Wildlife	Nothing to Report
11. Fisheries Resources	Nothing to Report
12. Wildlife Propagation and Stocking	Nothing to Report
13. Surplus Animal Disposal	Nothing to Report
14. Scientific Collections.	Nothing to Report
15. Animal Control.	Nothing to Report
16. Marking and Banding	Nothing to Report
17. Disease Prevention and Control.	Nothing to Report

<u>H. PUBLIC USE</u>	
1. General	8
2. Outdoor Classrooms - Students	Nothing to Report
3. Outdoor Classrooms - Teachers	Nothing to Report
4. Interpretive Foot Trails.	Nothing to Report
5. Interpretive Tour Routes.	Nothing to Report
6. Interpretive Exhibits/Demonstrations.	Nothing to Report
7. Other Interpretive Programs	Nothing to Report
8. Hunting	Nothing to Report
9. Fishing	8
10. Trapping.	Nothing to Report
11. Wildlife Observation.	8
12. Other Wildlife Oriented Recreation.	Nothing to Report
13. Camping	Nothing to Report
14. Picnicking.	Nothing to Report
15. Off-Road Vehicling.	Nothing to Report
16. Other Non-Wildlife Oriented Recreation.	Nothing to Report
17. Law Enforcement	8
18. Cooperating Associations.	Nothing to Report
19. Concessions	Nothing to Report

<u>I. EQUIPMENT AND FACILITIES</u>	
1. New Construction	8
2. Rehabilitation	10
3. Major Maintenance.	Nothing to Report
4. Equipment Utilization and Replacement.	10
5. Communications Systems	Nothing to Report
6. Energy Conservation.	10
7. Other.	Nothing to Report

J. OTHER ITEMS

1. Cooperative Programs. Nothing to Report
2. Items of Interest Nothing to Report
3. Credits Nothing to Report

A. HIGHLIGHTS

Desilting basin was constructed on Turner Creek. (Section I-1)

Cleared brush on Batchtown. (Section I-2)

F. HABITAT MANAGEMENT

2. Wetlands

Controlled burning which was scheduled for Middle Pool could not be accomplished because of flooding.

Prairie Pond was drained down enough to allow brush to be pushed off of 25 acres along the edge of the pond.

MSU #1 was disked twice by the cooperative farmer to control tall ironweed and then sowed to millet. The weather was so dry after the millet was planted that it didn't have time to come up and mature properly. It was of little value to wildlife.

The water levels of the Mississippi River remained low enough during the growing season that there was good waterfowl food production in upper and lower pools.

4. Croplands

Cooperative agreements were written up for 11 farmers to farm 225 acres. Corn was planted on 49 acres but weather and insects destroyed 29 acres. One farmer planted 23 acres which was destroyed by cutworms as soon as it came up. He then replanted and it never came up because of the dry weather. Another farmer planted 8 acres of corn which was blown down by a strong wind storm. Five acres of corn were disked up and planted to millet.

Soybeans were planted on 157 acres and 30 of these acres were aerial seeded to wheat before the beans were harvested. Geese use of this wheat browse was heavy.

Wheat, field peas, sunflowers, millet, brome grass, alfalfa, and fescue mixture were planted in smaller amounts.

Deposits from surplus crops were made into the 5092 Special Account. These deposits amounted to \$90.00 for wheat, \$1,694.00 for soybeans, and \$433.00 for corn.

10. Pest Control

The following chemicals were used to control pest plants in Batchtown farming operations.

Lorox was mixed with lasso and applied to 33.5 acres of soybeans to control broadleaf plants. Application rate was .5 to 1.6 lbs. AI/acre.

Sencor was applied to 43 acres of soybeans to control broadleaf weeds. Application rate was 1/4 to 1/3 lb. AI/acre.

Roundup was applied to 21 acres of corn for broadleaf plant and grass control at an application rate of 1 lb. AI/acre.

Atrazine was applied to 49 acres of corn to control broadleaf plants. Application rate was 1 to 2 lbs. AI/acre.

Butyrac was applied to 39 acres of soybeans to control foxtails and cockleburrs. Application rate was 2 oz. AI/acre.

Treflan was used to treat 42 acres of soybeans for the control of Johnson grass and broadleaf plants. Application rate was 1 to 2 lbs. AI/acre.

Lasso was applied to 102.5 acres of soybeans to control grass. Application rate was 1/4 to 2 lbs. AI/acre.

Lorsban 15 G was applied on corn to control cutworms and rootworms. Application rate was .5 to 1 lb. AI/acre.

G. WILDLIFE

2. Endangered and/or Threatened Species

The only species from this group seen on the area was the American Bald Eagle. Total use days were 270. A peak number of 17 was recorded on December 17.

3. Waterfowl

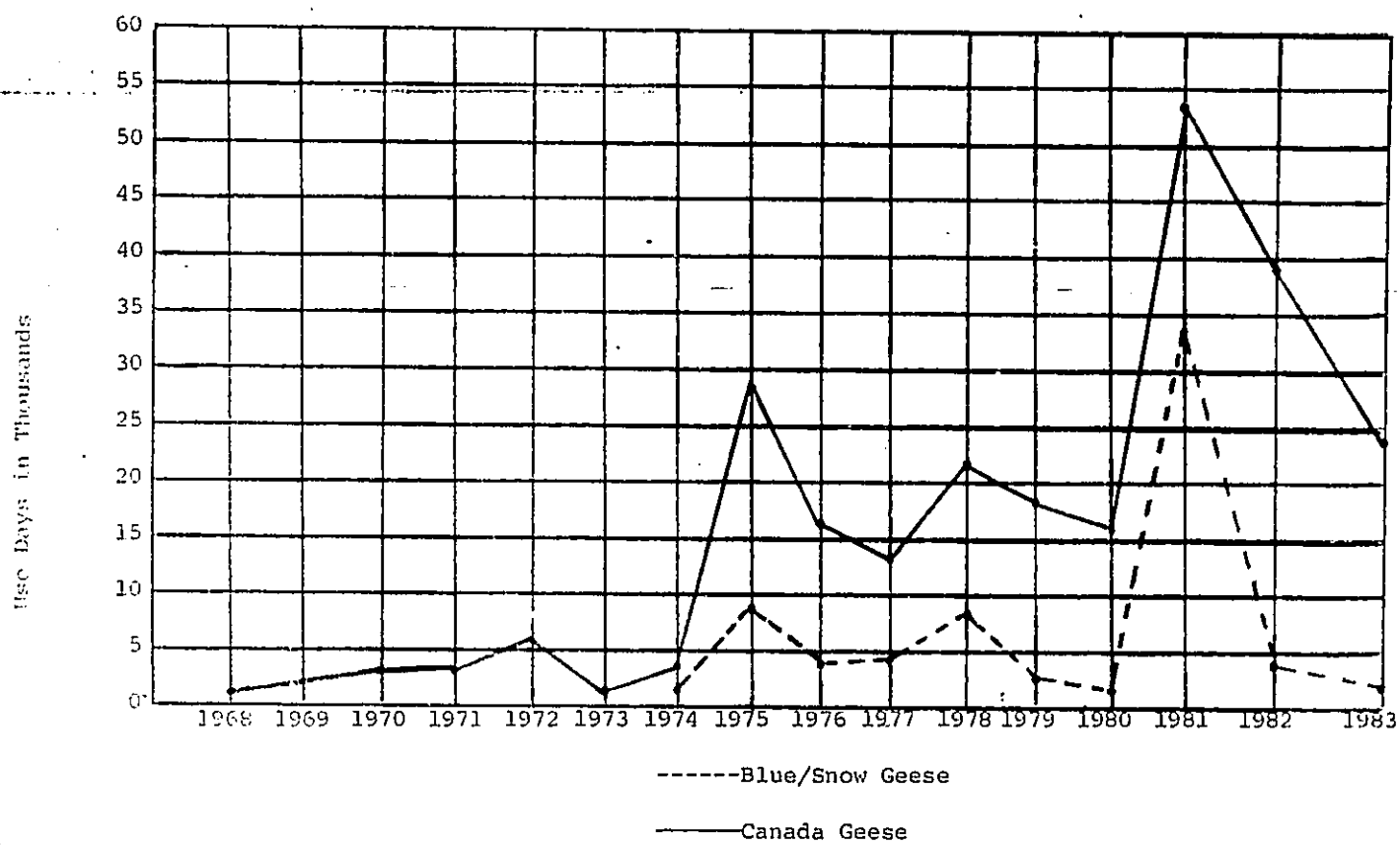
Duck use in 1983 nearly doubled that of 1982. Total use days were 1,924,955 with a peak population of 21,063 occurring in November. This marked the end of a 5-year decline, as duck use had been falling substantially since 1978.

Mallards accounted for 41% of the total duck use days.

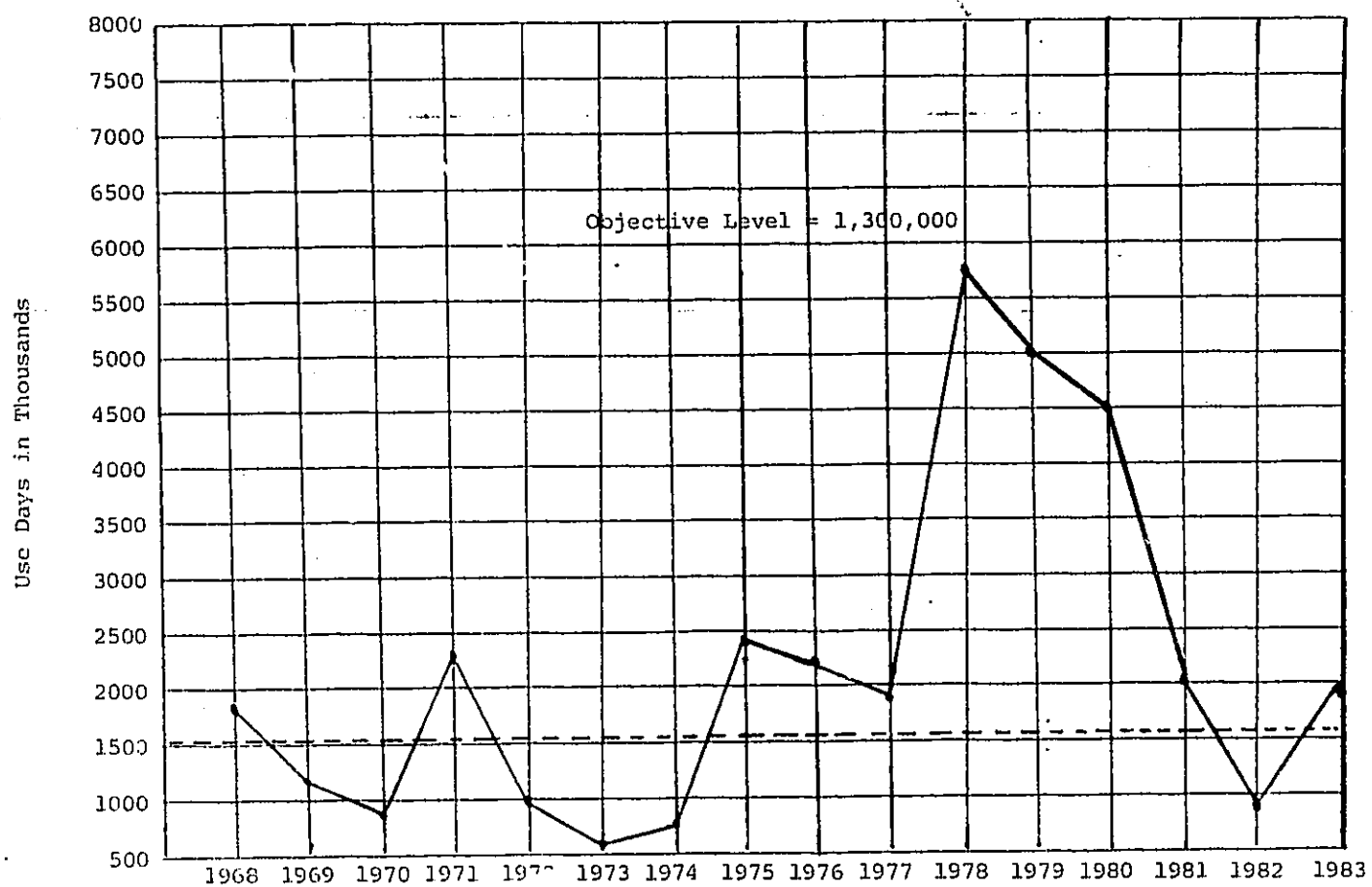
Duck production for the year was 500 mallards, 100 blue-winged teal, and 1,200 wood ducks.

Goose use days totalled 2,040 and 23,355 for Snow-blue geese and Canada geese, respectively. Total goose use was down 38% from 1982.

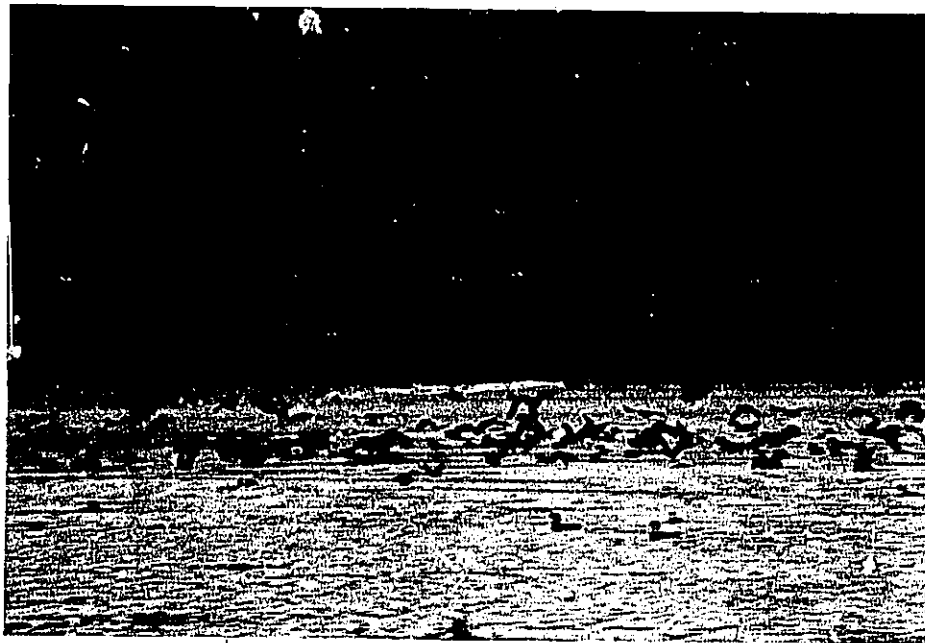
Coot use days nearly tripled from 1982 to 124,830 this year.



Goose Use Days - Batchtown Division



Duck Use Days - Batchtown Division



Mallards taking off from Prairie Pond.

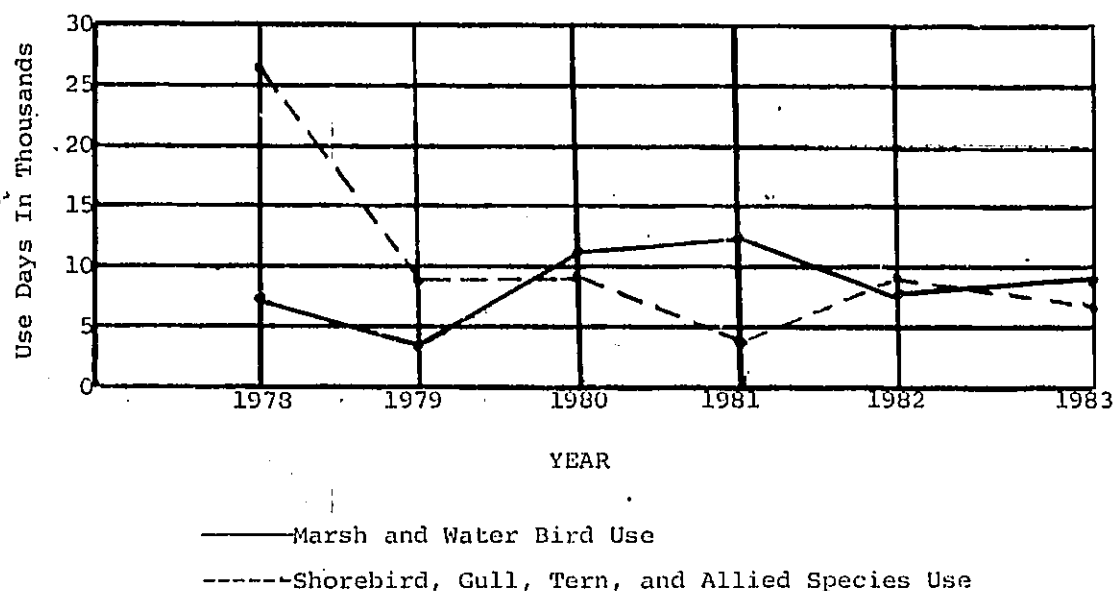
G.W.P. 11/1/83

4. Marsh and Water Birds

Use by this group remained virtually unchanged from 1982 showing a total of 8,585 use days. The great blue heron was the most common species, accounting for 40% of this use with a peak of 1,750 occurring in November.

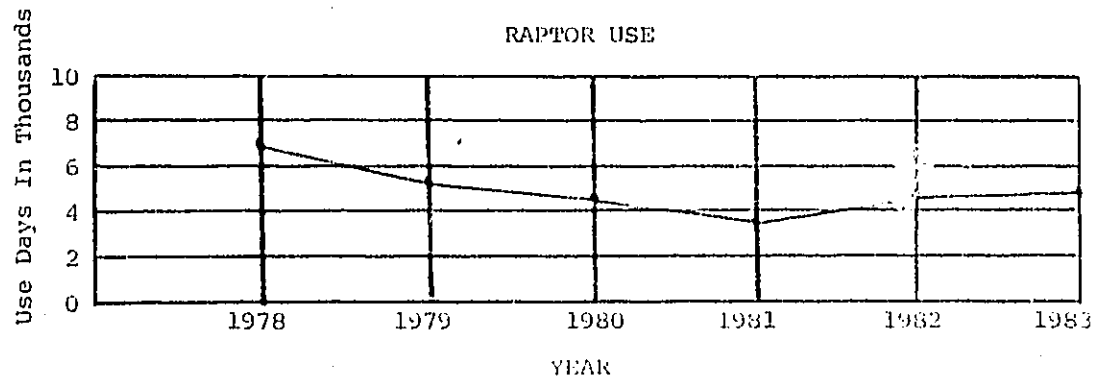
5. Shorebirds, Gulls, Terns, and Allied Species

Nine species from this group were seen on the area throughout the year, the most common being the killdeer. Use days totalled 5,415.



6. Raptors

Raptor use increased slightly -- 4,260 use days compared to 4,090 in 1982. Marsh hawks, Red-tailed Hawks, American Kestrels, Broad-winged Hawks, and Barred and Screech Owls were found on the area. The Red-tailed Hawk was the most common species.





Fishermen fishing off of rip - rap along the
Mississippi River.

G.W.P. 9/1/83

8. Game Mammals

The ever - present beaver continue to keep refuge personnel busy removing dams and cleaning out water control structures in order to drain water areas.

II. PUBLIC USE

1. General

Batchtown visitation totaled 3,000 units during the year. Heaviest visitation occurred in May when flood waters went back down so the public could use the entrance road. Eighty visits made by boat during March and April. This was the only way entrance could be made onto the refuge.

9. Fishing

Fishermen paid 1,150 visits to the refuge for 2,480 activity hours. Hook and line fishing in Prairie Pond was poor because it was drained but fishing off of the rock along the river was somewhat better.

Three permits were issued to fishermen to use commercial equipment in Prairie Pond prior to its being drained.

Total catch for these three fishermen was:

Carp	500 lbs.
Buffalo	3,000 lbs.
Bowfin	200 lbs.

11. Wildlife Observation

Visitors paid 1,785 visits to the refuge by foot and vehicle to check out the wildlife.

17. Law Enforcement

Illinois Department of Conservation Officer Stumpf paid several visits to the refuge to check for illegal activities. Two fishermen were given tickets for illegal commercial fishing activities on Swan Lake.

I. EQUIPMENT AND FACILITIES

1. New Construction

Maintenanceman Simon dug a ditch and constructed a desilting basin to replace Turner Creek which had silted shut and was flowing across 52 acres of refuge land and 10 acres of adjoining private land.

Mr. Harold Kraut, a retired employee of the SCS was a big help to the



Ditch cut into Prairie Pond and new flap gate installed to provide better water control.

G.W.P. 9/2/83



Desilting basin constructed by the refuge maintenance-mechanic. Runoff water flowing into this basin formerly flowed down Turner Creek before it silted in. The former path of Turner Creek can be seen as the light colored line which crosses the picture about 2/3 of the way from the bottom.

G.W.P. 9/1/83

refuge on this project doing the planning and surveying.

2. Rehabilitation

A ditch was opened up in Prairie Pond and a flap gate replaced with a screw gate for better water control on Prairie Pond.

4. Equipment Utilization and Replacement

A low boy trailer and tractor was rented from a local contractor to haul the Case 1450 dozer to Batchtown so it could be used to construct the Turner Creek desilting basin, clear some brush and to open up the access road along the river to the north end of Middle Pool.

5. Energy Conservation

The Mississippi River stages were watched closely and interested refuge backers contacted the refuge so all Middle Pool water management was accomplished using gravity flow by simply opening and closing gates rather than using the pump.

1983

MARK TWAIN NATIONAL WILDLIFE REFUGE
(Calhoun District)
CALHOUN DIVISION

ANNUAL NARRATIVE REPORT
Calendar Year 1983

U.S. Department of the Interior
Fish and Wildlife Service
NATIONAL WILDLIFE REFUGE SYSTEM

TABLE OF CONTENTS

	<u>PAGE</u>
<u>A. HIGHLIGHTS</u>	
	1
<u>B. CLIMATIC CONDITIONS</u>	
	1
<u>C. LAND ACQUISITION</u>	
1. Fee Title	Nothing to Report
2. Easements	Nothing to Report
3. Other	Nothing to Report
<u>D. PLANNING</u>	
1. Master Plan	Nothing to Report
2. Management Plan	Nothing to Report
3. Public Participation.	4
4. Compliance with Environmental Mandates. . .	Nothing to Report
5. Research and Investigations	Nothing to Report
<u>E. ADMINISTRATION</u>	
1. Personnel	4
2. Youth Programs.	4
3. Other	Nothing to Report
4. Volunteers Program.	Nothing to Report
5. Funding	4
6. Safety.	5
7. Technical Assistance.	5
8. Other Items	5
<u>F. HABITAT MANAGEMENT</u>	
1. General	Nothing to Report
2. Wetlands.	6
3. Forests	7
4. Croplands	7
5. Grasslands.	Nothing to Report
6. Other Habitats.	Nothing to Report
7. Grazing	Nothing to Report
8. Haying.	Nothing to Report
9. Fire Management	8
10. Pest Control.	8
11. Water Rights.	Nothing to Report
12. Wilderness and Special Areas.	Nothing to Report
13. WPA Easement Monitoring	Nothing to Report

<u>G. WILDLIFE</u>	<u>PAGE</u>
1. Wildlife Diversity.	8
2. Endangered and/or Threatened Species.	9
3. Waterfowl	9
4. Marsh and Water Birds	13
5. Shorebirds, Gulls, Terns, and Allied Species.	13
6. Raptors	14
7. Other Migratory Birds	Nothing to Report
8. Game Mammals.	14
9. Marine Mammals.	Nothing to Report
10. Other Resident Wildlife	14
11. Fisheries Resources	Nothing to Report
12. Wildlife Propagation and Stocking	Nothing to Report
13. Surplus Animal Disposal	Nothing to Report
14. Scientific Collections.	Nothing to Report
15. Animal Control.	Nothing to Report
16. Marking and Banding	Nothing to Report
17. Disease Prevention and Control.	Nothing to Report

<u>H. PUBLIC USE</u>	
1. General	Nothing to Report
2. Outdoor Classrooms - Students	Nothing to Report
3. Outdoor Classrooms - Teachers	Nothing to Report
4. Interpretive Foot Trails.	Nothing to Report
5. Interpretive Tour Routes.	Nothing to Report
6. Interpretive Exhibits/Demonstrations.	14
7. Other Interpretive Programs	16
8. Hunting	16
9. Fishing	16
10. Trapping.	Nothing to Report
11. Wildlife Observation.	16
12. Other Wildlife Oriented Recreation.	Nothing to Report
13. Camping	Nothing to Report
14. Picnicking.	Nothing to Report
15. Off-Road Vehicling.	Nothing to Report
16. Other Non-Wildlife Oriented Recreation.	17
17. Law Enforcement	17
18. Cooperating Associations.	Nothing to Report
19. Concessions	Nothing to Report

<u>I. EQUIPMENT AND FACILITIES</u>	
1. New Construction.	17
2. Rehabilitation.	Nothing to Report
3. Major Maintenance	Nothing to Report
4. Equipment Utilization and Replacement	17
5. Communications Svstems.	Nothing to Report
6. Energy Conservation	17
7. Other	Nothing to Report

<u>J. OTHER ITEMS</u>	<u>PAGE</u>
1. Cooperative Programs...	17
2. Items of Interest	18
3. Credits	18

<u>K. FEEDBACK</u>	20
------------------------------	----

A. HIGHLIGHTS

As in 1981 and 1982 the refuge was flooded by the Illinois and Mississippi Rivers. Flooding began in March and continued into May. (Section B)

Construction of the flammable materials storage building was completed. (Section I-1)

Clerk-Typist Douglas resigned and Debra Kuhn was hired to fill the vacant position. (Section E-1)

Eric Smith came on board as the refuge's first Assistant Refuge Manager. (Section E-1)

Hot dry weather during the growing season reduced the agricultural crop yields. (Section F-4)

The trailer house at the entrance to office complex was sold and removed. (Section I-7)

B. CLIMATIC CONDITIONS

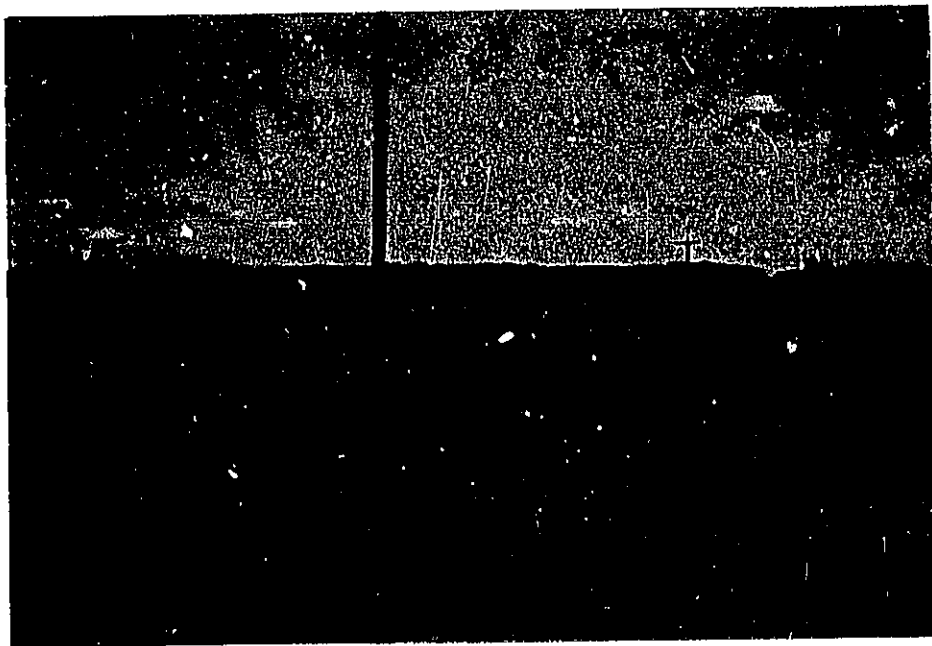
Weather conditions were very mild for most of 1983 as far as temperature were concerned. Temperatures remained above the 0°F mark and climbed into the unseasonable 70°F range during January and February, preventing both the Mississippi and Illinois Rivers from freezing as they have done in past years.

The refuge was flooded by the two rivers from March 24 - May 10. Waters rose to 10 feet above flood stage at Grafton, IL on April 8. Flooding was caused by heavy rains north of the refuge.

The summer months were, once again, very hot and dry. We received only half the normal rainfall for this period. This resulted in a severe reduction in corn and soybean yields.

Fall weather conditions were mild, but this came to a halt in December as winter arrived in great force. Record low temperatures and snow were frequent. What didn't happen in January or February occurred in December as ice built up in the Illinois River until the Brussels Ferry was shut down on the 18. It remained inoperative for the remainder of the year.

Temperatures ranged from a low of -16°F on December 25 to a high of 106°F on August 21. Total rainfall for the year amounted to 38.33 inches, compared to a normal of 36.64 inches. Snowfall totaled 10.5 inches compared to a normal of 19.8 inches. (See Table I)



It wouldn't be a Calhoun narrative unless there was
a flood, waters from the Illinois and Mississippi Rivers.

G.W.P. 1/28/83

Calhoun NWR, 1983 Weather Data

Month	Temperature °F				Precipitation (Inches)		
	Maximum	Minimum	Mean 1983	Mean 1941-1982	Rainfall	Normal	Snowfall
January	58	14	-38.0	31.4	0.48	1.85	2.00
February	71	8	47.4	34.6	1.01	2.28	Trace
March	82	22	52.8	44.3	2.82	3.34	0.25
April	84	27	58.6	56.0	5.40	3.71	1.50
May	86	34	74.9	65.9	7.21	4.06	0
June	96	49	87.4	75.4	2.41	4.04	0
July	103	53	96.5	79.4	0.55	3.32	0
August	106	60	99.5	77.4	3.28	2.94	0
September	100	34	86.9	70.0	1.21	3.15	0
October	88	32	69.4	58.7	5.60	2.64	0
November	76	26	62.0	45.4	5.79	2.64	0
December	50	-16	33.5	35.3	2.57	2.20	6.75
Total					38.33	36.64	10.50

D. PLANNING

3. Public Participation

Project Leader Stratton, Assistant Project Leader Anduss, Area Biologist Cummings, and Refuge Manager Peyton have met with and Corresponded with members of the Migratory Waterfowl Hunters several times concerning refuge management.

E. ADMINISTRATION

1. Personnel

Clerk-Typist Lucille Douglas resigned on April 29.

After three long months of what seemed like one calamity of errors after another a register of people interested in the clerk-typist position was received and Debra Kuhn was hired July 21 on a one year temporary appointment. Finally on September 18 all hurdles were cleared and Debra was given a permanent appointment.

An Assistant Refuge Manager position was added to the refuge staff with Eric Smith being selected to fill it. Eric had worked on other refuges as a Cooperative Education Student and was a welcome addition.

	<u>Permanent</u>		
	<u>Full-Time</u>	<u>Part-Time</u>	<u>Temporary</u>
FY 1983	3	1 (3 days/week)	1
FY 1982	2	1 (3 days/week)	1
FY 1981	2	1 (3 days/week)	1
FY 1980	2	1 (3 days/week)	1
FY 1979	2	1 (3 days/week)	1

Total salary costs for year \$71,000

2. Youth Programs

One youth was hired under the YCC program. Most of his time was spent keeping the building clean and maintaining the landscape around the buildings. The extremely hot weather and his lack of a driver's license made it impossible to send him out on any projects away from the office.

5. Funding

The refuge funding for 1983 was \$80,000 the same as the 1982 budget. Salaries accounted for 79% of this budget and other fixed costs accounted for 14%, not counting travel expense. This left only \$5,600 in discretionary monies.

6. Safety

Monthly safety meetings were held and the following films were shown:

"Winter Driving"
"Communicating Safety"
"Seconds to Live"
"Isolate and Stabilize"
"Everything to Lose"
"Drive and Survive"
"The Drowning Machine"
"The Perfect Pass"
"Your Way Out"
"A Question of Attitudes"
"The Unplanned"
"Five to Drive By"

Seven of these films count towards the required employee Defensive Driver Training.

There were no lost time accidents on the refuge during 1983. Total number of hours worked since the last lost-time accident is 12,454 hours.

A safety inspection was conducted by John Ellis (Refuge Supervisor, Division 2) while conducting an Operational Inspection of the refuge.

7. Technical Assistance

Refuge Manager assisted Illinois EPA with investigation of fish kill on Swan Lake on the Illinois State Hunting Area above the refuge.

Chemical spills on the Illinois and Mississippi Rivers were checked out to determine their effect on wildlife and Wildlife habitat.

8. Other Items

The following training courses were completed by refuge personnel during the year.

<u>Course/Workshop</u>	<u>Location</u>	<u>Participants</u>
Biological Farming	Iowa State University, Ames, Iowa	Peyton

Law Enforcement Refresher/Firearms Qualification	Springfield, Illinois	Peyton
Project Leaders Meeting	Muscantine, Iowa	Peyton
Firearms Qualification	Quincy, Illinois	Peyton
Administrative Orientation Workshop	Regional Office	Kuhn
CPR Training (prior to Law Enforcement Training)	Alton, Illinois	Smith

F. HABITAT MANAGEMENT

2. Wetlands

a. Swan Lake

This unit which contains 2,500 acres makes up over half the Calhoun Division. High waters and silt which has been washed in by flood waters reduced the productivity of the lake for the second year. Plants in the arrowhead family had just started to come back around the edge in 1981-82, but there was no sign of these plants in 1984. There was considerable use of this area by resting waterfowl.

b. Moist Soil Units

Pumping of the MSUs was slow this year because the water control ditch was silted in and the water level in Swan Lake was low during September. Pumping was finally completed in November.

MSU #1 (53.2 acres) remained flooded until August when all the water had dried up except for low spots and ditches. Swamp smartweed (*Polygonum coccineum*) was predominant plant. These plants produced only a small volume of seed for waterfowl use.

MSU #2 (6.5 acres) was to wet to be burned, plowed, and planted to millet as was planned. With no management to control the willows for two years they have crowded out most of the other vegetation out.

MSU #3 (35.8 acres) had a heavy stand of swamp smartweed. This area was not flooded and produced little or no waterfowl food. No management was conducted on this unit.

MSU #4 (8 acres) was flooded throughout the year. No drawdown was conducted on this unit, but evaporation created enough mudflats around the edges to provide good habitat for shorebirds. It also received heavy use by waterfowl as a resting area.

MSU #5 (24.7 acres) was disked twice with a heavy duty disk and sowed to millet in July after the unit had finally dried up. After the unit was planted it remained to dry to bring millet up until late in the growing season, by that time it was too late for the millet to produce seed. Waterfowl use was light.

MSU #6 (22 acres) was disked and sowed to winter wheat and Austrian winter peas in August to provide early browse for blue and snow geese. Because of the dry weather the wheat never came up and there was a very limited stand of winter peas. Geese did utilize what little browse there was.

Office MSU was scheduled to be planted to buckwheat and millet which could not be accomplished because of high waters. There was a good stand of wild millet in the low spots, and to the refuge's dissatisfaction an equally good stand of cockleburrs on the high spots. Holes were cut in vegetation on the unit in October to provide open areas for waterfowl to land and feed. It was then flooded with Crissofulli pump. It received little waterfowl use.

3. Forests

Checks were made on trees planted in 1981 and 1982 south of the refuge buildings. Good survival was obtained on the maples and sycamores planted in 1981 but only about 40% of the walnuts, autumn olive, red oaks, pin oaks, crab apples, and white pines that were planted in 1982 made it through the two extremely dry summers.

Plans were made to plant pin oaks in MSU #3 in an effort to start a hardwood timber plot in the area.

4. Croplands

Eight cooperative farmers were able to cultivate and farm 725 acres on Calhoun this year. This year's climatic conditions reduced both the number of acres that could be farmed and the yield of the crops that were planted.

Corn was planted on 162 acres with 90 acres being left in the fields for wildlife, corn yields were reduced to approximately 35 bushels per acre because it had to be planted late and because of the long dry period during the growing season.

Soybeans were planted on 479 acres with 352 of these acres being aerial seeded to wheat before the soybeans were harvested. As in all the other crops the wheat did not come up because of the severe drought.

The following crops were planted to provide wildlife food and as a soil builder, 72 acres of clover, 8 acres of wildlife food patch mix, and 10 acres of sunflowers.

Surplus crops grown on Corps of Engineers lands were harvested and sold and the resulting funds were deposited in the 5092 Special Account. This money comes back to the contributing station for rehabilitation and maintenance. This years deposits totaled \$5,385.00 for the sale of 676.59 bushels of soybeans.

9. Fire Management

A new trailer was purchased to haul the slip-in fire pump and tank which was purchased in 1982.

No wild fires occurred on the refuge during 1983 and no prescribed burns were conducted because of flood waters..

10. Pest Control

Six different chemicals were used to control undesirable vegetation.

Sencor was applied at a rate of $\frac{1}{2}$ lb. AI/acre to control cocklebur in soybeans. Sencor was applied to 3 acres.

Basagran was applied to 129 acres of soybeans to control cocklebur, nutgrass, and velvet weed. The application rates ranged from .75 lb. AI/acre to 1 lb. AI/acre.

Roundup was applied to 12 acres of corn at an application rate of 1 lb. AI/acre to control undesirable weeds.

Butyrac was applied to 56 acres of soybeans to control foxtail and cocklebur. The application rate was 2 oz. AI/acre.

Treflan was applied to 20 acres of soybeans to control broadleaf plants and grass at an application rate of 1 lb. AI/acre.

Lasso was applied to 296 acres of soybeans to control grass. Application rates ranged from 1.5 lb. to 2 lbs. AI/acre.

Refuge Manager Peyton and Maintenceman Simon both maintained their Illinois State Chemical Applicators Certification.

G. WILDLIFE

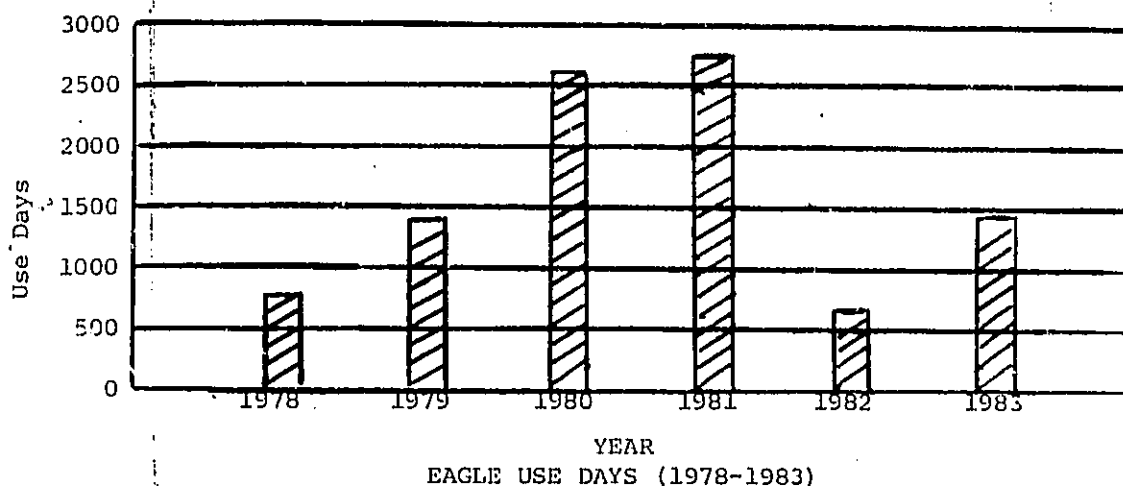
1. Wildlife Diversity

An objective of refuge planning development and management was to provide a diversified habitat for a diversity of wildlife. The

Invasion of refuge wetland and upland units by willows, cottonwoods, and maples present a constant challenge to providing diversified habitat. Disking, plowing, mowing, and prescribed burning are all techniques used to meet this challenge.

2. Endangered and/or Threatened Species

Bald Eagle use had been steadily increasing since 1978 until 1982, when there was a sharp decline which could have been attributed to the very cold weather in the early part of that year. Temperatures were much warmer this year, and eagle use rose because of it. Use days totalled 1,490, twice that of 1982.



Two osprey sightings were noted, one in September and one in October. The two sightings may have been of the same bird.

3. Waterfowl

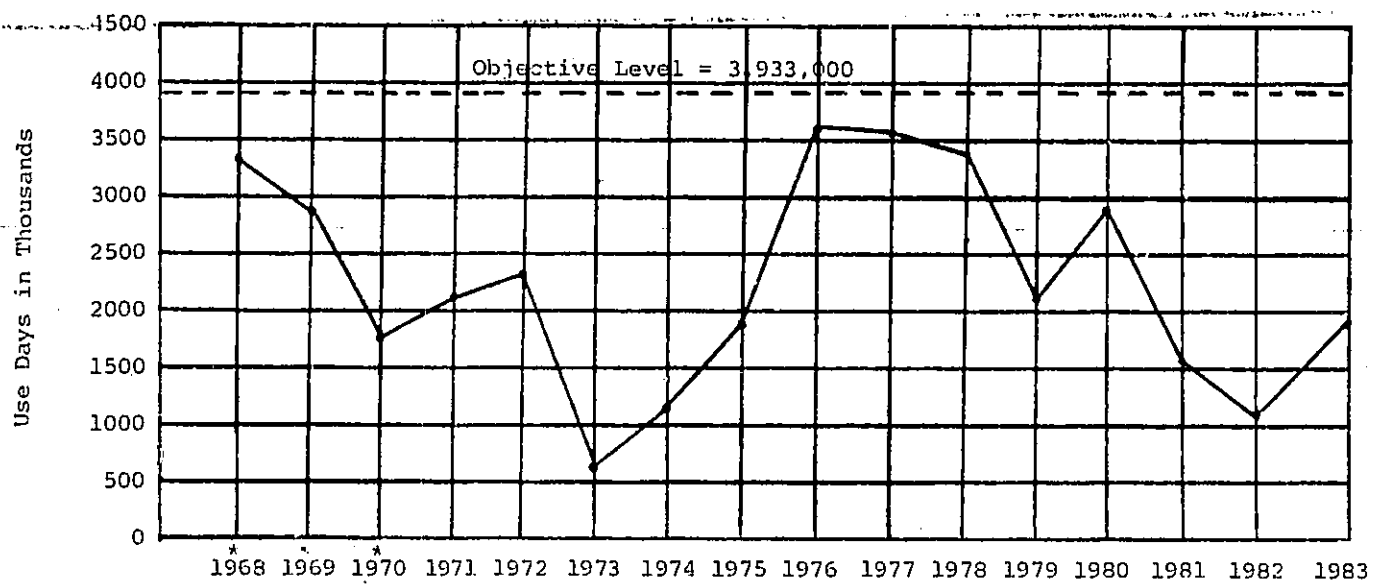
Duck use rose for the first time since 1980. Use days in 1983 totalled 1,929,675, an increase of 74%. Mallards accounted for 62% of this use, illustrating a more diverse population from last year when mallards almost completely dominated use of the refuge.

The largest concentration of ducks occurred in November when a peak of 25,290 was reached. Duck production for the year was 420 mallards, 40 blue-winged teal, and 875 wood ducks.

While duck use rose, goose use fell sharply. Snow/blue goose use days totalled 294,710, down 62% from 1982, and Canada goose use days totalled 51,030, down 60% from 1982.

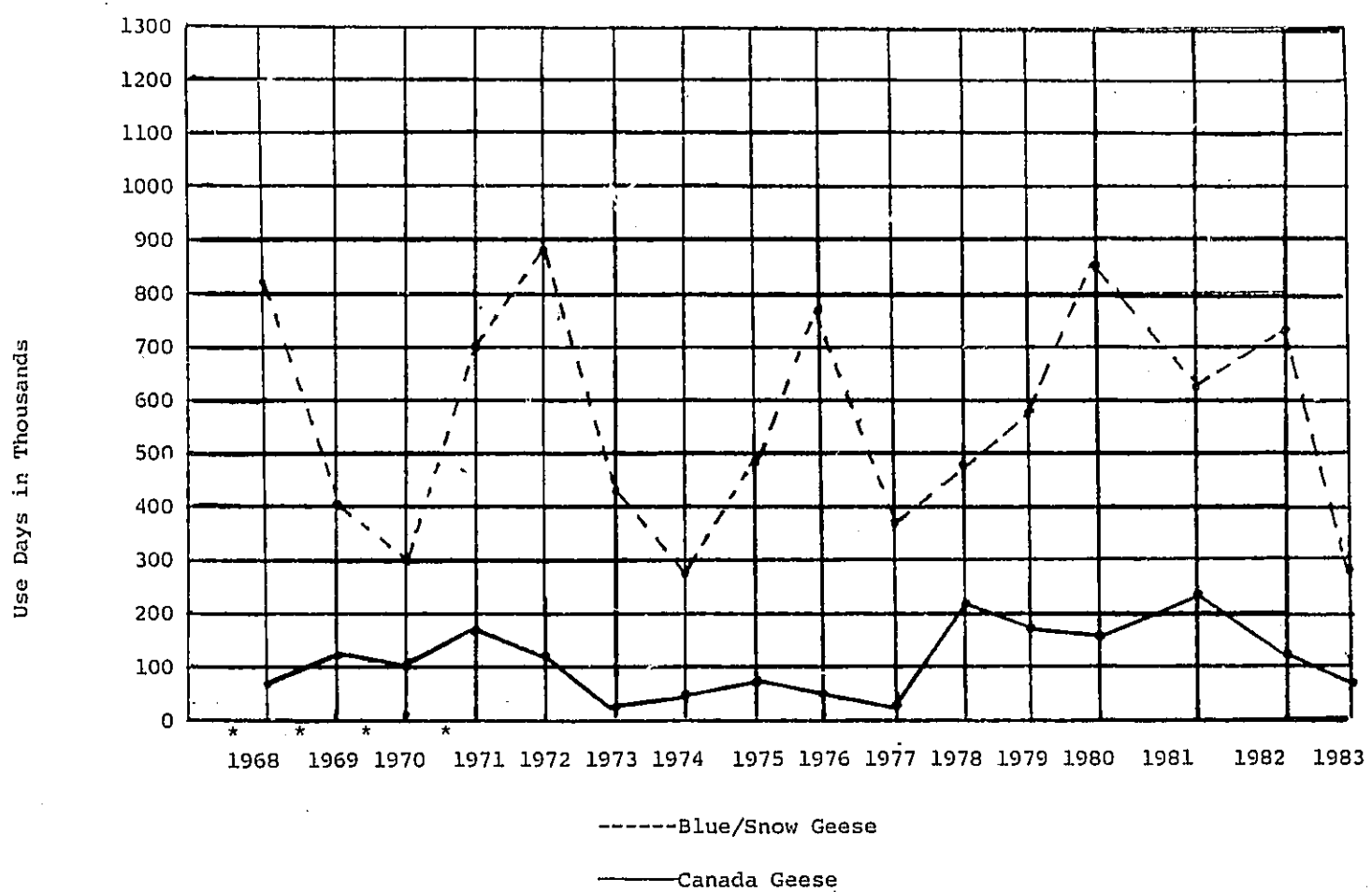
Coot use days totalled 455,690 - more than twice last years use - with a peak of 9,390 occurring in April.

The fall migration got off to a late start this year due to the fact that the warm weather stayed with us for so long.



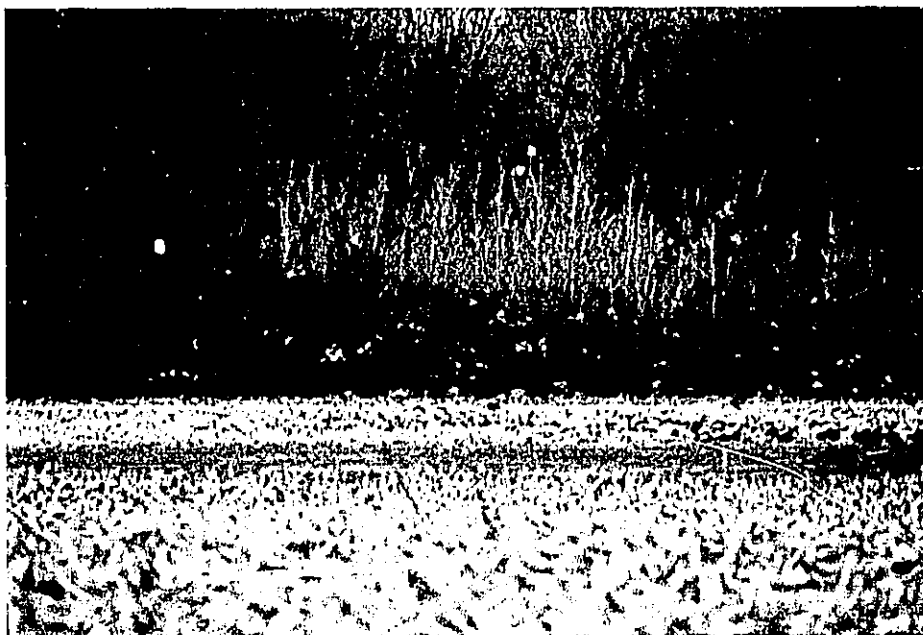
Duck Usage - Calhoun Division

*Calhoun and Gilbert Lake Divisions Combined



Goose Usage - Calhoun Division

*Calhoun and Gilbert Lake Divisions Combined



Mallards flying in to feed with blue and snow geese in a refuge corn field.

G.W.P. 1/27/83



This white pelican stayed on the refuge all winter.

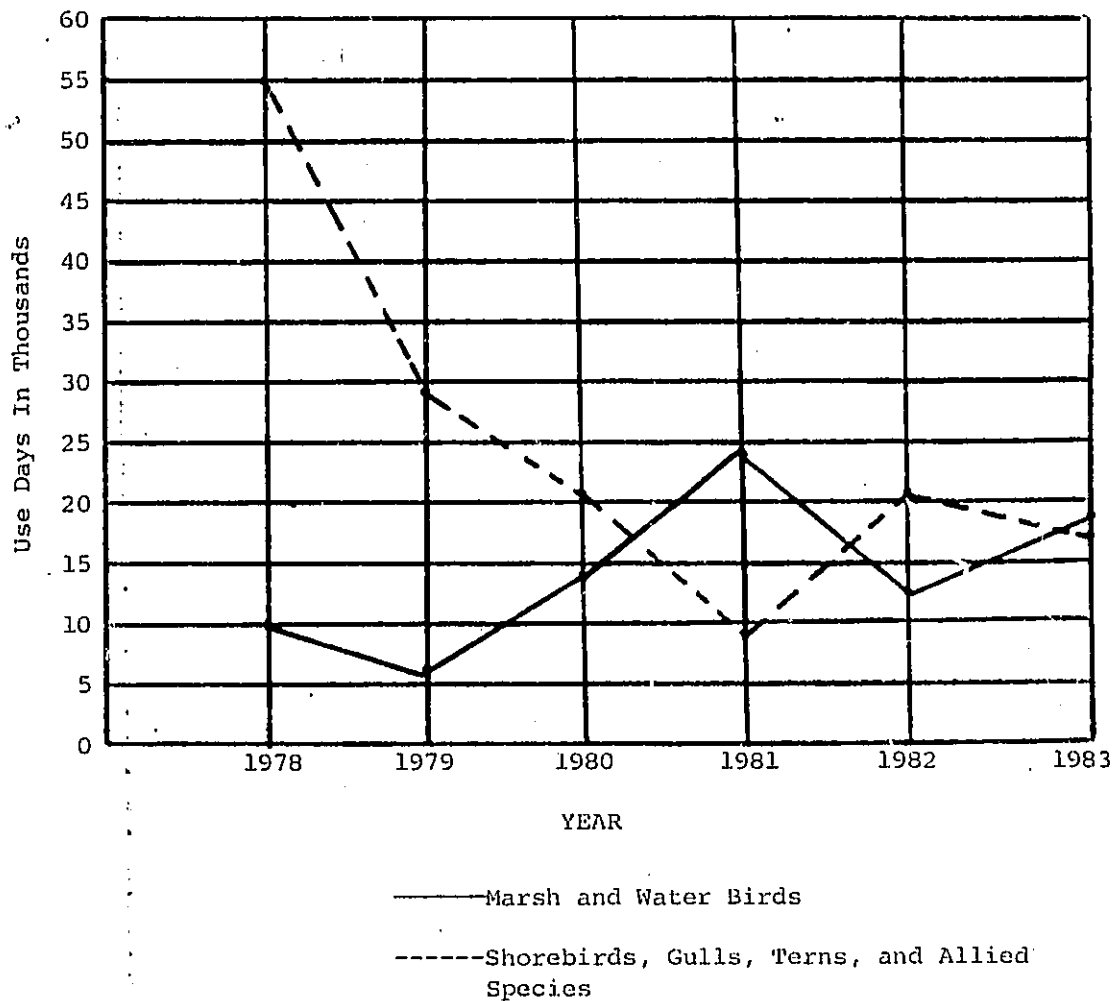
G.W.P. 1/27/83

4. Marsh and Water Birds

Marsh and water bird use days totalled 18,435, an increase of 30% from 1982. Great blue heron, common egret, and double-crested cormorants were the most common species seen from this group. One white pelican stayed on the area through January and February.

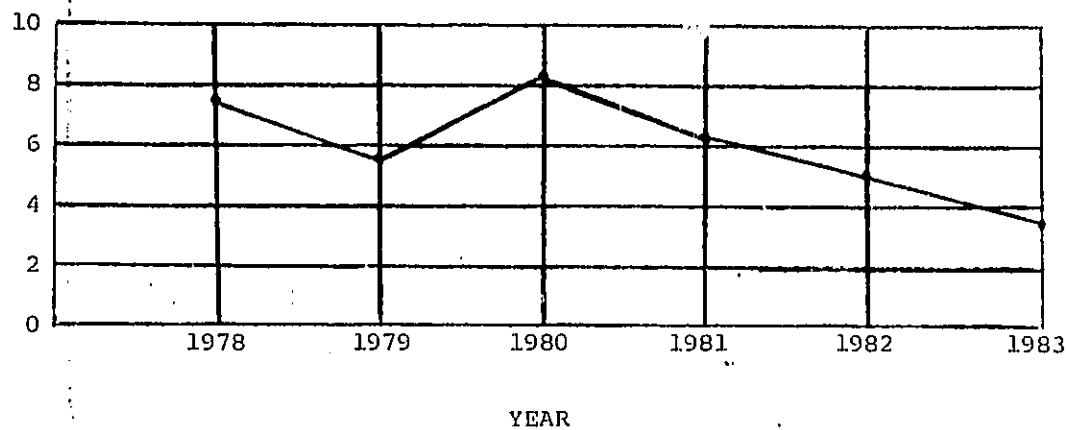
5. Shorebirds, Gulls, Terns, and Allied Species

Use days by this group totalled 16,130, down 24% from 1982. Seventeen different species were seen on the area, the most common being the killdeer and pectoral sandpiper. Species uncommon to the area that were also seen were the caspian tern, northern phalarope, and ruddy turnstone.



6. Raptors

Raptor use days totalled 3,610. Red-tailed hawks, marsh hawks, cooper's hawks, broad-winged hawks, american kestrels, and barred and screech owls were seen during the year -- red-tailed hawks were the most common.



RAPTOR USE - CALHOUN DIVISION

8. Game Mammals

The increase in the beaver and muskrat populations continued in 1983. These animals are still determined to obstruct the progress of our water management program.

10. Other Resident Wildlife

Quail continued to make good use of the native grass stands, and their numbers were still on the rise as a result of this.

II. PUBLIC USE

1. General

Visitation on Calhoun totaled 3,444 visits during the year. Heaviest visitation occurred in May when 577 visitors came to the refuge.

Numerous news releases were presented by local media to keep the public informed about the refuge.

6. Interpretive Exhibits/Demonstrations

The auditorium in the new building provides a place for the refuge staff to present films and slide talks to local clubs and school groups, and exhibits and demonstrations can be set up in the visitor information area.



Group of students from Harwin Grade School identifying the refuge mounted birds.

G.W.P. 1/28/83



Mr. Ralph Shook a local bluebird enthusiast giving a slide talk on bluebirds to a Calhoun County Home Demonstration Group in the refuge auditorium.

G.W.P. 9/1/83

The following groups were accommodated during the year:

Bill Brush brought 46 students from Sodan High School in St. Louis on a tour of the refuge.

Refuge Manager Peyton presented a slide talk to 30 4-H club members from Golden Eagle, IL.

Thirty six members of the Calhoun County Home Extension Club met in the refuge auditorium. The film "Bird Watching" was shown and Mr. Ralph Shook a local bluebird enthusiast presented a program on the status of the eastern bluebird.

7. Other Interpretive Program

Assistant Refuge Manager Smith presented a slide talk on refuge management to a group of students at West Middle School in Alton, IL.

Assistant Manager Smith assisted Lyle Stemmerman with the annual Future Farmers of America convention in Kansas City on November 9-11.

8. Hunting

There is no hunting on the refuge but Eric Smith assisted the Clarence Cannon and the Quincy crew with the Gardner Deer Hunt on October 18 and 19.

9. Fishing

Hook and line fishing was heavy on the area from March through May, but dropped sharply after that because of the hot weather and all the refuge ditches and MSUs dried up. During the year fishermen made 1,297 visits to the refuge for a total of 4,058 activity hours.

Permits were issued to 50 fishermen to fish the lower end of Swan Lake using commercial equipment. The unemployment in the area created a heavy demand for these 50 permits and they were quickly issued out. Total fish caught under these permits totaled 139,595 lbs. The catch consisted of:

Carp	61,262 lbs.
Buffalo	58,863 lbs.
Bowfin	757 lbs.
Catfish	6,638 lbs.
Drum	6,910 lbs.
Paddlefish	5,165 lbs.

11. Wildlife Observation

Wildlife observation occurs from county highway #1, where people stop to observe waterfowl feeding in refuge corn fields. As the office MSU attracts more wildlife and as more people hear about the

observation deck at the office it is becoming more popular for wildlife observation.

16. Other Non-Wildlife Oriented Recreation

In the past visitors have been successful in looking for pecans on the refuge, but this years pecan crop was a complete bust.

17. Law Enforcement

Only the refuge manager has L.E. authority, so therefore, law enforcement was limited to occassional patrol and no violators were apprehended.

Refuge officers were assisted a great deal by Illinois State Law Enforcement Officers. They were especially helpful on illegal commercial fishing in Swan Lake and wrote several tickets on this.

I. EQUIPMENT AND FACILITIES

1. New Construction

The construction was completed on the new flammable materials storage building.

4. Equipment Utilization and Replacement

Water control structure on MSU #1 was replaced.

A new four wheeled trailor was purchased to haul the 200 gallon fire pump and tank that was purchased in 1982.

A telephone answering machine was purchased and installed.

A new string grass trimmer was purchased.

6. Energy Conservation

The results from the enrgy consulting firm's inspection were returned and plans were drawn up to take care of several of the deficiencies.

J. OTHER ITEMS

1. Cooperative Programs

Refuge Manager Peyton met with Rick Messinger, manager of the State of Illinois Mississippi River Fish and Wildlife Area to coordinate management practices for the two area.

The Illinois Department of Conservation used the refuge landing strip to take off and land while aerial seeding millet on their hunting areas.

2. Items of Interest

A refuge revenue sharing check for \$6,928.00 was presented to the Calhoun County Treasurer.

Refuge Manager Peyton met Project Leader Stratton and Assistant Project Leader Anduss at Pleasant Hill, where he picked up an injured Great-Horned Owl and carried it on to the Tree House Wildlife Rehabilitation Center in Brighton, IL.

Refuge Manager Peyton attended Wildlife Resources Programatic in Bloomington, MN and Law Enforcement Training in Springfield, IL in May.

Refuge Manager Peyton checked out an oil spill on the Mississippi River in St. Louis in May.

Refuge Manager Peyton attended the Illinois Natural History Survey, River Research Lab. Open House in Grafton, IL in August.

Refuge Manager Peyton requalified with weapon at Quincy.

Clerk-Typist Kuhn attended administrative orientation workshop in the regional office on November 7-9.

Assistant Refuge Manager Smith received CPR training in Alton, IL.

3. Credits

Assistant Refuge Manager Smith wrote up Sections B and G, other sections were completed by Manager Peyton. Refuge Clerk-Typist Kuhn edited and typed this report.



Four different kinds of native grasses that were planted around the refuge buildings in 1981. Indian grass is the most prominent grass. Little bluestem is the shorter red grass on the extreme right, big bluestem is the taller reddish grass and switchgrass is in the left foreground.

G.W.P. 11/2/83

K. FEEDBACK

Getting a clerk-typist applicant certified through the OPM for this refuge was a very trying experience, which took most of the summer to accomplish. One bright point during the experience was the very willing help and assistance that was received from the personnel office in the RO.

Things are really looking up on the refuge now that a new clerk-typist and a new assistant refuge manager has been hired. Maybe if they get all their training and other duties away from the station completed we will be able to complete the many reports in a more complete and timely fashion.